

**Supplemental Specification
2005 Standard Specification Book**

SECTION 02746

HYDRATED LIME

Delete Section 02746 and replace with the following:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products and procedures for incorporating hydrated lime into all asphalt mixes.

1.2 REFERENCES

- A. AASHTO M 303: Lime for Asphalt Mixtures
- B. ASTM C 110: Physical Testing of Quicklime, Hydrated Lime, and Limestone
- C. ASTM C 1097: Hydrated Lime for Use in Asphaltic-Concrete Mixtures
- D. ASTM C 1602: Mixing Water Used in the production of Hydraulic Cement Concrete
- E. UDOT Quality Management Plan

1.3 QUALITY ASSURANCE

- A. Prequalification: Hydrated Lime, through UDOT Quality Management Plan for Hydrated Lime, Section 510.

1.4 SUBMITTALS

- A. Verification that the supplier is pre-qualified.

PART 2 PRODUCTS

2.1 HYDRATED LIME

- A. Hydrated Lime: Meet AASHTO M 303, Type I, as specified.
 - 1. Conform physical requirements to ASTM C 1097, subparagraph d.1.
 - 2. Use test method ASTM C 110, paragraph 5.4.

2.2 WATER

- A. Use potable water or water meeting ASTM C 1602.

PART 3 EXECUTION

3.1 APPLICATION

- A. Add hydrated lime to all asphalt pavement mixes.
 - 1. Add the determined quantity of lime, following mix design.
 - 2. Base the amount of hydrated lime used on the dry weight of the aggregate.
 - 3. Use either Method A or B, unless Method B is called for in the bid schedule.
- B. Method A: Lime Slurry: One part lime and three parts water by weight.
 - 1. Add lime at a minimum of 1 percent by weight.
 - 2. Maintain the lime slurry mix in a malted milk consistency.
 - 3. Deliver lime slurry to the twin shaft pugmill for mixing with aggregate.
 - 4. Adjust quantity (percent) of lime as necessary, based on results of Hamburg Wheel Tracker test.
- C. Method B: Lime and Aggregate Stockpile Marination:
 - 1. Before introducing hydrated lime, provide sufficient free moisture to thoroughly wet the aggregate and activate the lime.
 - 2. Add lime at a minimum of 1 ½ percent by weight.
 - 3. Thoroughly mix wet aggregate/lime mixture in a twin shaft pugmill.
 - 4. Marinate the aggregate/lime mixture in the stockpile for a minimum of 48 hours.
 - 5. Adjust quantity (percent) of lime as necessary, based on results of Hamburg Wheel Tracker test.
 - 6. Use the wet cured aggregate within 60 days.

- D. Mixing Methods A and B: Provide a horizontal twin shaft pugmill.
 - 1. Adjust mixing paddles in the pugmill so that the aggregate being discharged is completely coated by the lime slurry.
 - 2. Do not allow volume of material in the pugmill to extend above the vertical position of the blade tips.

3.2 CONTROLLING AND MONITORING

- A. Control the lime batching operation by the Program Logic Control (PLC) System based upon production set up data.
- B. Monitor the following aspects and record on the computer data log printout:
 - 1. Display target and actual rates.
 - 2. Belt weight bridge for lime.
 - 3. Locked-in water meter.
 - 4. Meter to transfer lime slurry.
 - 5. Closed end loop to mainframe computer.

3.3 QUALITY CONTROL

- A. Tolerance Controls
 - 1. Tolerance lime weight vessel static calibration ± 1.5 percent.
 - 2. Dynamic delivery calibration ± 1.5 percent.
 - 3. Inlet flow meter ± 2 percent.
 - 4. Discharge flow meter ± 1.5 percent.

END OF SECTION